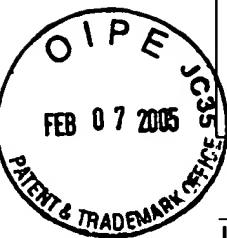


09/14/04, 448.

02-09-05

Cofc \$



I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV 307 814 144 US, in an envelope addressed to: MS Post Issue, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.  
Dated: 2/7/05 Signature: Lori Giuffrida  
(Lori Giuffrida)

Docket No.: 60693US (49163)  
(PATENT)

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:  
Barry J. Byrne et al.

Patent No.: 6,783,972 B1

Issued: August 31, 2004

For: METHODS FOR LARGE-SCALE  
PRODUCTION OF RECOMBINANT AAV  
VECTORS

### REQUEST FOR CERTIFICATE OF CORRECTION PURSUANT TO 37 CFR 1.323

MS Post Issue  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Certificate  
FEB 16 2005  
of Correction

Dear Sir:

Upon reviewing the above-identified patent, Patentee noted an error concerning an omission of an Assignee which should be added and/or corrected.

Applicants inadvertently failed to request listing of the co-assignee, The Johns Hopkins University, when submitting the payment of Issue Fee. Included with this request are copies of the recorded assignment documents clearly showing that The Johns Hopkins University and University of Florida Research Foundation are co-assignees. Should a fee be required under 37 CFR §120(a), please charge our Deposit Account No. 04-1105 in the amount of \$100.00.

The omission now sought to be corrected is our inadvertent error, the correction of which does not involve new matter or require reexamination.

02/11/2005 SSITHIB2 00000129 041105 6783972

01 FC:1811 100.00 DA

FEB 17 2005

Transmitted herewith is a proposed Certificate of Correction effecting such amendment. Patentee respectfully solicits the granting of the requested Certificate of Correction.

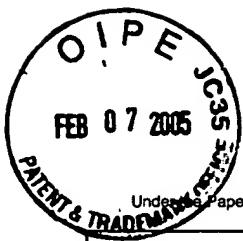
The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105, under Order No. 60693US (49163).

Dated: February 7, 2005

Respectfully submitted,

By Barbara S. Kitchell  
Barbara S. Kitchell  
Registration No.: 33,928  
EDWARDS & ANGELL, LLP  
P.O. Box 55874  
Boston, Massachusetts 02205  
(203) 353-6848  
Attorney for Applicant

FEB 17 2005



PTO/SB/44 (04-04)

Approved for use through 04/30/2007. OMB 0651-0033

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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(Also Form PTO-1050)

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,783,972 *B1*  
DATED : August 31, 2004  
INVENTOR(S) : Barry J. Byrne et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

**\*\*ASSIGNEE\*\*: Please add the following additional Assignee:**

**THE JOHNS HOPKINS UNIVERSITY  
BALTIMORE, MD (US)**

MAILING ADDRESS OF SENDER:

Barbara S. Kitchell

EDWARDS & ANGELL, LLP

P.O. Box 55874

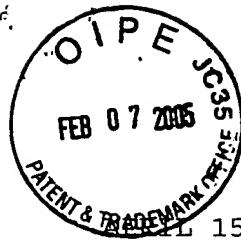
Boston, Massachusetts 02205

PATENT NO. 6,783,972

No. of additional copies   

187708

*FEB 17 2005*



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

15, 2000

PTAS

WILLIAMS, MORGAN, & AMERSON, P.C.  
DAVID W. HIBLER  
7676 HILLMONT, SUITE 250  
HOUSTON, TEXAS 77040

DOCKETING DEPT.

\*101264877A\*

APR 20 2000

WILLIAMS, MORGAN & AMERSON

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/10/2000

REEL/FRAME: 010530/0762

NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

BYRNE, BARRY J.

DOC DATE: 12/16/1999

ASSIGNOR:

MUZYCZKA, NICHOLAS

DOC DATE: 12/16/1999

ASSIGNOR:

ZOLOTUKHIN, SERGEI

DOC DATE: 12/16/1999

ASSIGNEE:

FLORIDA, UNIVERSITY OF  
1938 W. UNIVERSITY AVENUE  
GAINESVILLE, FLORIDA 32603

SERIAL NUMBER: 09404448

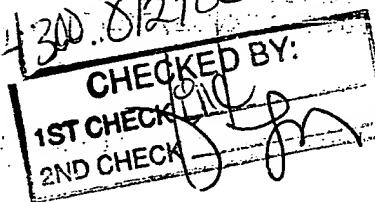
FILING DATE: 09/22/1999

PATENT NUMBER:

ISSUE DATE:

RECORDED/SEARCHED/INDEXED/MAILED

SEARCHED, SERIALIZED, INDEXED, AND MAILED  
RECORDED, SEARCHED, INDEXED, AND MAILED  
SEARCHED, SERIALIZED, INDEXED, AND MAILED



A S S I G N M E N T

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned, do hereby:

SELL, ASSIGN AND TRANSFER to University of Florida (the "Assignee"), having a place of business at 1938 W. University Avenue, Gainesville, Florida, 32603, our entire right, title and interest for the United States and all foreign countries in and to any and all improvements which are disclosed in the application for United States Letters Patent, Serial No. 09/404,448 which has been filed on September 22, 1999 and is entitled "**METHODS FOR LARGE-SCALE PRODUCTION OF RECOMBINANT AAV VECTORS**", such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such improvements in the Assignee, and for securing, maintaining and enforcing proper patent protection for such improvements;

TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

Signature:   
Name: Barry J. Byrne

Date: 12/16/99

STATE OF FLORIDA )  
 ) ss.  
COUNTY OF Alachua )

BEFORE ME, the undersigned authority, on this 16 day of Dec., 1999, personally appeared Barry J. Byrne, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same of his own free will for the purposes and consideration therein expressed.

Vicky R. Parrott  
Notary or Consular Officer

[SEAL]



Signature: Nicholas Muzyczka  
Name: Nicholas Muzyczka

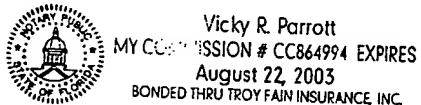
Date: 12/16/99

STATE OF FLORIDA )  
 ) ss.  
COUNTY OF Alachua )

BEFORE ME, the undersigned authority, on this 16 day of Dec., 1999, personally appeared Nicholas Muzyczka, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same of his own free will for the purposes and consideration therein expressed.

Vicky R. Parrott  
Notary or Consular Officer

[SEAL]



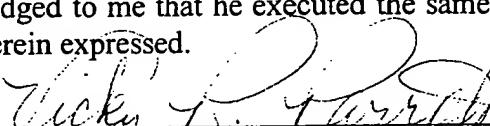
Signature: 

Name: Sergei Zolotukhin

Date: 12/16/99

STATE OF FLORIDA )  
COUNTY OF Alachua ) ss.

BEFORE ME, the undersigned authority, on this 16 day of Dec., 1999, personally appeared Sergei Zolotukhin, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same of his own free will for the purposes and consideration therein expressed.



Vicki R. Parrott  
Notary or Consular Officer

[SEAL]



Vicki R. Parrott  
MY COMMISSION # CC364994 EXPIRES  
August 22, 2003  
BONDED THRU TROY FAIN INSURANCE, INC

010530/0762 PAGE 2

ALLYSON PURNELL, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

02-10-2000

FORM PTO-1595  
(Rev. 6-93)

OMB No. 0651-0011 (exp. 4/94)

RE



U.S. Department of Commerce

Patent and Trademark Office

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JAN 10 PM 12:33  
2000  
RE/FINANCE

## 1. Name of conveying party(ies):

Barry J. Byrne, Nicholas Muzyczka and Sergei Zolotukhin

Additional name(s) of conveying party(ies) attached?  Yes  No

## 3. Nature of conveyance:

Assignment  
 Security Agreement  
 Other

Merger  
 Change of Name

Execution Date: December 16, 1999

## 2. Name and address of receiving party(ies):

Name: University of Florida

Street Address: 1938 W. University Avenue

City: Gainesville State: Florida Zip: 32603

Additional name(s) & address(es) attached?  Yes  No

## 4. Application number(s) or registration number(s):

If this document is being filed together with a new application, the execution date of the application is:

## A. Patent Application No.(s):

09/404,448

## B. Patent No.(s):

Additional numbers attached?  Yes  No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: David W. Hibler  
 Williams, Morgan & Amerson, P.C.  
 7676 Hillmont, Suite 250

City: Houston State: Texas Zip: 77040

6. Total number of applications and patents involved: 17. Total fee (37 C.F.R. 3.41) \$ 80.00 Enclosed Authorized to be charged to deposit account  
if check insufficient or inadvertently omitted8. Deposit account number: 50-0786/4300.012100  
(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

## 9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

David W. Hibler

David W. Hibler

1/16/2000

Name of Person Signing, Reg. No. 41,071

Signature

Date

Total number of pages including cover sheet, attachments and documents: 7

Mail documents to be recorded with required cover sheet information to:  
 Commissioner of Patents and Trademarks, Box Assignment  
 Washington, D.C. 20231

02/10/2000 DNGUYEN 00000021 09404448

01 FC:581

40.00 OP

CERTIFICATE OF MAILING  
37 C.F.R 1.8

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January 6, 2000

David W. Hibler

David W. Hibler



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APRIL 15, 2000

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PTAS

WILLIAMS, MORGAN & AMERSON, P.C. APR 20 2000  
DAVID W. HIBLER  
7676 HILLMONT, SUITE 250  
HOUSTON, TX 77040

WILLIAMS, MORGAN & AMERSON



\*101264876A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
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RECORDATION DATE: 01/10/2000

REEL/FRAME: 010530/0775

NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

CONWAY, JAMES E.

DOC DATE: 11/24/1999

ASSIGNOR:

HAYWARD, GARY S.

DOC DATE: 11/24/1999

ASSIGNEE:

JOHNS HOPKINS UNIVERSITY, THE  
111 MARKET PLACE, SUITE 906  
BALTIMORE, MARYLAND 21202

SERIAL NUMBER: 09404448

FILING DATE: 09/22/1999

PATENT NUMBER:

ISSUE DATE:

4380-012100

SEARCHED	INDEXED	SERIALIZED	FILED
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1ST CHECK <i>[Signature]</i>			
2ND CHECK <i>[Signature]</i>			

CHECKED BY:  
1ST CHECK *[Signature]*  
2ND CHECK *[Signature]*

SEDLEY PYNE, PARALEGAL  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned, does hereby:

SELL, ASSIGN AND TRANSFER to The Johns Hopkins University (the "Assignee"), having a place of business at 111 Market Place, Suite 906, Baltimore, Maryland 21202, my entire right, title and interest for the United States and all foreign countries in and to any and all improvements which are disclosed in the application for United States Letters Patent, Serial No. 09/404,448 which has been filed on **September 22, 1999** and is entitled "**METHODS FOR LARGE-SCALE PRODUCTION OF RECOMBINANT AAV VECTORS**", such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such improvements in the Assignee, and for securing, maintaining and enforcing proper patent protection for such improvements;

TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

Signature: James Conway Date: Nov. 19, 1999  
Name: James E. Conway James Conway November 21, 1999

STATE OF MARYLAND )  
 ) ss.  
COUNTY OF Cecil )

BEFORE ME, the undersigned authority, on this 24 day of November, 1999, personally appeared James E. Conway, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same of his own free will for the purposes and consideration therein expressed.

Elizabeth H. Norris  
Notary or Consular Officer

[SEAL]

**ELIZABETH H. NORRIS**  
**NOTARY PUBLIC**  
**COMMISSION EXPIRES 3/1/02**

Signature: Gary S. Hayward Date: Nov. 24, 1999  
Name: Gary S. Hayward

STATE OF MARYLAND )  
 ) ss.  
COUNTY OF Baltimore )

BEFORE ME, the undersigned authority, on this 24<sup>th</sup> day of November, 1999, personally appeared Gary S. Hayward, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same of his own free will for the purposes and consideration therein expressed.

Debra R. Key  
Notary or Consular Officer  
my commission expires: 6/1/01

[SEAL]

02-10-2000

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(Rev. 6-93)

OMB No. 0651-0011 (exp. 4/94)

2000 JAN 10 PM 12:23



U.S. Department of Commerce

101264876

Patent and Trademark Office

OPR/FINANCE

The Commissioner of Patents and Trademarks: Please record the attached original document or copy thereof.

## 1. Name of conveying party(ies):

James E. Conway and Gary S. Hayward

Additional name(s) of conveying party(ies) attached?  Yes  No

## 3. Nature of conveyance:

 Assignment Merger Security Agreement Change of Name Other

Execution Date: November 24, 1999

## 2. Name and address of receiving party(ies):

Name: The Johns Hopkins University

Street Address: 111 Market Place, Suite 906

City: Baltimore State: Maryland Zip: 21202

Additional name(s) & address(es) attached?  Yes  No

## 4. Application number(s) or registration number(s):

If this document is being filed together with a new application, the execution date of the application is:

## A. Patent Application No.(s):

09/404,448

## B. Patent No.(s):

Additional numbers attached?  Yes  No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: David W. Hibler

Williams, Morgan & Amerson, P.C.  
7676 Hillmont, Suite 250

City: Houston State: Texas Zip: 77040

6. Total number of applications and patents involved: 17. Total fee (37 C.F.R. 3.41) \$ 80.00 Enclosed Authorized to be charged to deposit account  
if check insufficient or inadvertently omitted8. Deposit account number: 50-0786/4300.012100  
(Attach duplicate copy of this page if paying by deposit account)

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## 9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

David W. Hibler

*David W. Hibler*

11/16/2000

Name of Person Signing, Reg. No. 41,071

Signature

Date

Total number of pages including cover sheet, attachments and documents: 7Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents and Trademarks, Box Assignment  
Washington, D.C. 20231CERTIFICATE OF MAILING  
37 C.F.R. 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on the date below:

January 6, 2000

Date

*David W. Hibler*  
David W. Hibler

02/10/2000 DNGUYEN 00000022 09404448

01 FC:581

40.00 00

UNITED STATES  
PATENT AND  
TRADEMARK OFFICE

APRIL 19, 2002

Chief Financial Officer and Chief Administrative Officer  
Washington, DC 20231  
www.uspto.gov

PTAS  
WILLIAMS, MORGAN & AMERSON, P.C.  
MARK D. MOORE  
7676 HILLMONT, SUITE 250  
HOUSTON, TEXAS 77040



\*101996745A\*

DOCKETING DEPT

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

APR 25 2002

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THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS  
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REFERENCED BELOW.

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INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA  
PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD  
FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY  
CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723.  
PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE,  
ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY,  
SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 02/19/2002

REEL/FRAME: 012600/0400  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
FLORIDA, UNIVERSITY OF

DOC DATE: 12/12/2001

ASSIGNEE:  
UNIVERSITY OF FLORIDA RESEARCH  
FOUNDATION  
223 GRINTER HALL  
GAINESVILLE, FLORIDA 32611

SERIAL NUMBER: 09404448  
PATENT NUMBER:

FILING DATE: 09/22/1999  
ISSUE DATE:

TONYA LEE, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS



2-19-02

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PATENT & TRADEMARK OFFICE

02-27-2002



FORM PTO-1595  
(Rev. 6-93)

OMB No. 0651-0011 (exp. 4/94)

U.S. Department of Commerce

101996745  
PATENTS ONLY

Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original document or copy thereof.

1. Name of conveying party(ies):

University of Florida

Additional name(s) of conveying party(ies) attached?  Yes  No

3. Nature of conveyance:

Assignment

Merger

Security Agreement

Change of Name

Other

Execution Date: December 12, 2001

2. Name and address of receiving party(ies):

Name: University of Florida Research Foundation

Internal Address: 223 Grinter Hall

Street Address:

City: Gainesville State: FL Zip: 32611

Additional name(s) & address(es) attached?  Yes  No

4. Application number(s) or registration number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s):

09/404,448

B. Patent No.(s):

Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Mark D. Moore

Williams, Morgan & Amerson, P.C.  
7676 Hillmont, Suite 250

City: Houston State: Texas Zip: 77040

6. Total number of applications and patents involved: 1

7. Total fee (37 C.F.R. 3.41) \$ 40.00

Enclosed

Authorized to be charged to deposit account  
if check insufficient or inadvertently omitted

8. Deposit account number: 50-0786/4300.012100  
(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

MARK D. MOORE

*Mark D. Moore*

02/01/02

Name of Person Signing, Reg. No. 42,903

Mark D. Moore

Date

Total number of pages including cover sheet, attachments and documents: 3

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents and Trademarks, Box Assignment  
Washington, D.C. 20231

02/27/2002 GT0N11 00000024 09404448

01 FC:581

40.00 DP

CERTIFICATE OF MAILING  
37 C.F.R. 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Assistant Commissioner of Patents and Trademarks, Washington, D.C. 20231, on the date below.

February 1, 2002  
Date

Mark D. Moore

ASSIGNMENT FROM THE UNIVERSITY OF FLORIDA

TO THE

UNIVERSITY OF FLORIDA RESEARCH FOUNDATION, INC.

In consideration of one dollar (\$1.00) and other good and valuable consideration, the UNIVERSITY OF FLORIDA, existing by virtue of the laws of the State of Florida, and having an office at 223 Grinter Hall, Gainesville, Florida 32611, sells and assigns to the UNIVERSITY OF FLORIDA RESEARCH FOUNDATION, INCORPORATED, a Florida not for profit corporation, having its office at 223 Grinter Hall, Gainesville, Florida 32611, its successors and assigns, its entire right, title and interest throughout the world in and to the improvements in :

A Scaleable Method for Production of Recombinant AAV, UF#-10014, U.S. Serial No. 09/404,448, filed 4/21/99, created by Barry J. Byrne, Serge Zolotukhin, Nicholas Muyczka, James E. Conway, and Gary Hayward, inventors;

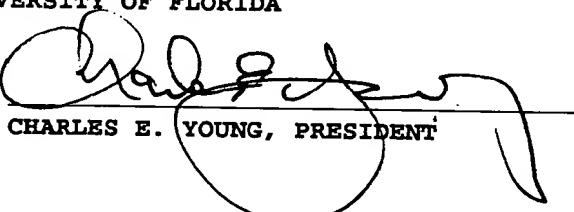
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Assignment from UF to UFRFI  
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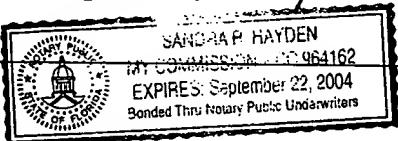
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The foregoing instrument was acknowledged before me this 12 day of December, 2001, by Charles E. Young, President, who is personally known to me and who did take an oath.



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US006783972B1

(12) **United States Patent**  
Byrne et al.

(10) **Patent No.:** US 6,783,972 B1  
(45) **Date of Patent:** Aug. 31, 2004

(54) **METHODS FOR LARGE-SCALE PRODUCTION OF RECOMBINANT AAV VECTORS**

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(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** 09/404,448

(22) **Filed:** Sep. 22, 1999

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(51) **Int. Cl.:** C12N 7/01; C12N 15/09; C12N 15/00; C12P 21/06; C07H 21/04

(52) **U.S. Cl.:** 435/235.1; 435/320.1; 435/325; 435/456; 435/69.1; 536/23.1; 514/44

(58) **Field of Search:** 435/325, 235.1, 435/320.1, 456, 69.1; 536/23.1; 514/44

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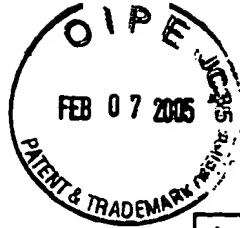
**Primary Examiner—Gerry Leffers**

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(57)

**ABSTRACT**

Disclosed are HSV-1 amplicons that supply all necessary helper functions required for rAAV packaging and methods for their use. These HSV-1 amplicons have been shown to be capable of rescuing and replicating all forms of rAAV genomes including rAAV genomes introduced into cells by infection of rAAV virions, rAAV genomes transfected into cells on plasmids or proviral rAAV genomes integrated into cellular chromosomal DNA. Also provided are methods for preparing high-titer rAAV vector compositions suitable for gene therapy and the delivery of exogenous polynucleotides to selected host cells.



Application No. (if known): 09/404,448

Attorney Docket No.: 60693(49163)

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